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When Culture Is Misjudged: Toward Magnitude Culturology in Language Studies

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Abstract Culture functions as a central explanatory construct in pragmatics, intercultural communication, and applied linguistics. Yet cultural interpretation frequently proceeds without explicit proportional calibration, allowing localized linguistic phenomena to be elevated into generalized cultural claims. This article contends that many such explanations stem from distortions in magnitude judgment, instances in which salient communicative features are assigned interpretive weight disproportionate to their systemic distribution and interactional role. Drawing on debates in pragmatics, politeness and intercultural studies, cognitive bias research, complexity-oriented perspectives on language, and discussions of technologically mediated communication, the paper identifies a shared analytical gap: the absence of a systematic mechanism for assessing the relative weight of cultural inference. In response, Magnitude Culturology is proposed as a theoretical and diagnostic framework for calibrating cultural interpretation. The model advances five evaluative dimensions: scale, impact, complexity, holism, and accuracy, to guide proportionate analysis. By foregrounding calibrated judgment as a methodological principle, the study argues that more responsible cultural explanation requires not abandoning the concept of culture, but refining the criteria by which its explanatory scope is determined.

Keywords: *Magnitude culturology, Intercultural pragmatics, Cultural interpretation, Pragmatic load, Education*

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1. Introduction

Culture has long functioned as a central explanatory construct in pragmatics, intercultural communication, and applied linguistics. From early cross-cultural frameworks that conceptualized culture as a system of shared norms and values shaping communicative expectations (Hall, 1976; Hofstede, 1980, 2001; Triandis, 1995) to developments in pragmatics and politeness theory that framed recurrent linguistic patterns through macro-level cultural models (Brown & Levinson, 1987; Spencer-Oatey & Franklin, 2009), recurrent linguistic patterns have frequently been interpreted through the lens of macro-cultural categories. These traditions significantly advanced the study of language-in-context by providing powerful heuristics for understanding how cultural orientations such as individualism-

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collectivism, power distance, and high-context versus low-context communication shape interactional behavior. However, they also normalized a mode of reasoning in which localized linguistic features are elevated into broader cultural characterizations without explicit calibration of their relative scope and weight within communicative systems. More recent scholarship has challenged essentialist and static views of culture, emphasizing relational, interactional, and emergent understandings of meaning and identity in communication (Blommaert, 2020; Busch, 2017; Holliday, 2018; Piller, 2017). Parallel developments in usage-based linguistics and cognitive approaches have foregrounded scalarity, gradience, and probabilistic distribution in language structure and use (Divjak, 2019), while complexity-oriented perspectives conceptualize language as a dynamic system in which patterns emerge through distributed interactions rather than fixed cultural templates (Larsen-Freeman, 2014; Verspoor & Lowie, 2021). These developments collectively undermine categorical thinking and de-essentialize culture conceptually; however, they do not in themselves provide explicit criteria for calibrating the proportional weight of cultural interpretation, nor do they specify how much explanatory weight cultural categories should carry in analyzing particular linguistic events.

The need for proportional reasoning has been addressed more directly in recent work on magnitude across disciplinary domains. Pishghadam (2025a, 2025b, 2025c, 2025d, 2026), Pishghadam and Ebrahimi (2026), and Rokhsari (2025) introduce the concept of magnitude as an interpretive principle concerned with the relative weighting of phenomena within broader systems, arguing that analytical distortions often arise when salient features are granted disproportionate explanatory status. In this line, magnitude is conceptualized not merely as size or frequency, but as relational weight within interconnected structures. Although these studies extend across linguistic, psychological, and educational contexts, their implications for intercultural pragmatics and cultural explanation in language studies have not yet been systematically elaborated. At the same time, research in cognitive psychology demonstrates that human judgment is highly sensitive to salience and availability, often leading to disproportionate inference from vivid but statistically marginal data (Fiske & Taylor, 2020; Kahneman, 2011; Ross, 1977; Tversky & Kahneman, 1973). In sociolinguistics, discussions of indexicality and markedness similarly recognize that not all forms carry equal social or cultural load (Silverstein, 2003). Research on intercultural communication has further emphasized that cultural identities are co-constructed in interaction rather than predetermined by national or ethnic affiliation, yet even constructivist models often lack mechanisms for assessing proportionality (Holliday, 2018; Piller, 2017). Thus, despite converging insights across cognitive psychology, sociolinguistics, and intercultural studies, intercultural analysis still lacks a coherent diagnostic framework for evaluating whether cultural interpretations are proportionate to the linguistic phenomena under examination. This gap is particularly significant given that speech act theory, politeness research, and cross-cultural pragmatics, while providing rich descriptive tools, offer limited criteria for evaluating proportionality in cultural inference, and cognitive biases such as the availability heuristic and fundamental attribution error reinforce the tendency to overattribute behavior to culture rather than to situational or systemic factors (Blum-Kulka et al., 1989; Kádár & Haugh, 2014; Kasper & Rose, 2002; Locher & Watts, 2005; Taguchi & Roever, 2017). Without proportional reasoning, cultural explanations risk inflation, elevating small interactional patterns into civilizational traits, and the absence of proportional diagnostics allows such interpretations to solidify into academic claims that are cognitively coherent but empirically uncalibrated.

This article builds on the magnitude-based perspective advanced by Pishghadam (2025a) and situates it within broader debates in pragmatics, intercultural communication, cognitive bias research, and complexity theory to propose Magnitude Culturology as a theoretical and diagnostic lens for calibrating cultural inference in language studies. The framework conceptualizes cultural meaning as gradient, relational, and weight-sensitive rather than categorical and monolithic, and it posits that cultural interpretation must be calibrated according to the relative magnitude of linguistic phenomena rather than inferred from their mere presence. To operationalize this perspective, five evaluative dimensions are advanced: scale, which addresses whether a linguistic phenomenon is being interpreted at the appropriate level of analysis and whether micro-level patterns are being inappropriately scaled up into macro-cultural claims; interactional impact, which concerns the pragmatic consequences of linguistic forms in interaction and whether their relational load is being overestimated or underestimated;

complexity, which captures the number and interaction of variables shaping meaning and whether multi-layered phenomena are being reduced to single cultural explanations; holism, which examines the relation of linguistic forms to the broader communicative system and whether forms are being isolated from co-occurring pragmatic resources; and accuracy, which evaluates whether cultural interpretations align with the actual scope and weight of linguistic phenomena or whether simplified and distorted cultural conclusions are being produced. These dimensions provide criteria for assessing whether cultural explanations are proportionate to systemic distribution, interactional function, and contextual embedding, thereby enabling analysts to distinguish between situations where cultural inference is warranted and situations where alternative explanations such as situational, interpersonal, or institutional factors carry greater explanatory weight. By foregrounding calibrated magnitude judgment as a methodological requirement, the study seeks to refine, not displace, the role of culture in pragmatic and intercultural research, recognizing that advancing intercultural analysis does not require abandoning cultural explanation but rather learning to assess how much it matters in any given interpretive act. The specific questions guiding this investigation are: what are the primary sources and mechanisms of magnitude misjudgment in cultural interpretation across pragmatics, politeness research, intercultural communication, and AI-mediated contexts; how can the five diagnostic dimensions of scale, impact, complexity, holism, and accuracy be systematically operationalized to evaluate the proportionality of cultural inference; and what theoretical and practical implications does a magnitude-aware analytical framework have for linguistic theory, language education, intercultural assessment, and computationally mediated communication?

2. Culture in Language Studies: Traditional Approaches

The study of culture in language research has historically been grounded in macro-conceptualizations that frame culture as a system of shared norms, values, and behavioral patterns. Foundational work in intercultural communication conceptualizes culture as a structured, relatively stable configuration that shapes communicative expectations and social interaction (Hall, 1976; Hofstede, 2001; Triandis, 1995). Within this paradigm, culture operates as a large-scale explanatory variable that accounts for systematic behavioral tendencies across groups. Hall's (1976) distinction between high-context and low-context cultures, for example, framed communicative difference as an overarching cultural orientation toward implicitness or explicitness. Similarly, Hofstede's (2001) dimensional model, individualism vs. collectivism, power distance, and uncertainty avoidance, positioned culture as a quantifiable macro-structure influencing institutional and interpersonal communication. Triandis (1995) further refined collectivism–individualism constructs to account for variations in self-construal and relational alignment. While these models provided powerful heuristics, they treated culture as an aggregate-level system. Micro-interactional phenomena were interpreted in terms of macro-cultural dimensions. The interpretive flow moved downward, from abstract cultural values to concrete communicative behaviors. What remained largely unexamined, however, was whether the empirical scale of the observed linguistic pattern justified macro-level cultural attribution in the first place. This top-down scaling rarely examined whether the observed linguistic phenomenon warranted macro-level attribution. In parallel, Hymes' (1974) ethnography of communication advanced a contextualized view of language use by emphasizing speech events, speech communities, and communicative competence. This approach foregrounded patterned behavior but still operated with relatively bounded notions of community coherence. Cultural meaning was described as embedded in patterned communicative routines, yet the proportional weight of individual features was seldom interrogated.

Cultural scripts theory (Wierzbicka, 2009) attempted to articulate culturally shared meanings encoded in language through semantic primitives. While this approach avoided crude stereotyping, it nevertheless assumed systematic cultural coherence. Brown and Levinson's (1987) politeness theory similarly posited universal face wants modulated by cultural variables, implicitly positioning culture as a large-scale explanatory force affecting strategic choice. Across these traditions, culture was richly described but rarely scaled. That is, scholars articulated *what* culture is and *how* it shapes communication, but not *how much* weight a specific linguistic feature carries within the broader cultural system. Micro-level phenomena were often interpreted as reflections of macro-level value systems without a mechanism for proportional calibration.

From a magnitude-sensitive perspective, the core limitation of traditional approaches is not conceptual inadequacy but scalar overextension. Culture is frequently treated as homogeneous, static, and macro-scaled. Variation within systems, differential pragmatic load, and contextual modulation are acknowledged but not integrated into a diagnostic model of magnitude. The key gap, therefore, is not the absence of cultural theory but the absence of magnitude-sensitive analysis. Without proportional reasoning, cultural explanations risk inflation, elevating small interactional patterns into civilizational traits. In addition to macro-structural cultural models, contemporary sociolinguistic scholarship has increasingly problematized the reification of culture as a stable explanatory variable. Scholars working within transnational and mobility-oriented frameworks argue that culture is not a bounded container but a dynamic repertoire of semiotic resources distributed unevenly across communities and contexts (Blommaert, 2020; Busch, 2017). From this perspective, communicative behavior cannot be straightforwardly mapped onto pre-existing cultural categories, as individuals strategically mobilize linguistic resources across shifting interactional spaces.

Moreover, research in intercultural communication has emphasized that cultural identities are co-constructed in interaction rather than predetermined by national or ethnic affiliation (Holliday, 2018; Piller, 2017). This shift from static to performative models of culture challenges earlier top-down approaches; however, even constructivist models often lack mechanisms for assessing proportionality. While they de-essentialize the concept of culture conceptually, they rarely specify how much explanatory weight cultural categories should carry in analyzing particular linguistic events. Thus, the theoretical move from essentialism to constructivism, although crucial, does not automatically solve the problem of magnitude misjudgment. Operationally, magnitude misjudgment refers to interpretive expansion beyond the empirically supported scope of linguistic evidence. Even fluid conceptions of culture can become analytically inflated when micro-interactional details are interpreted as culturally emblematic without systematic scaling.

3. Speech Act Theory and Politeness

Speech act theory fundamentally reshaped linguistic analysis by shifting attention from sentence meaning to communicative action. Austin's (1962) tripartite distinction between locutionary, illocutionary, and perlocutionary acts foregrounded the performative dimension of language. Searle (1969) systematized this framework, refining categories of illocutionary force and institutional conditions of felicity. Pragmatic theory thereby established that utterances do not merely convey information but perform actions within normative frameworks. The concepts of illocutionary force and uptake introduced a dynamic understanding of communicative effect. Later developments in pragmatics extended these ideas to implicature (Grice, 1975), contextual inference, and relevance (Sperber & Wilson, 1995). Despite these advances, classical pragmatics focuses primarily on *effect* rather than *misjudgment*. It explains how utterances achieve force and how hearers interpret intentions, but it does not provide tools for diagnosing when interpretations are disproportionately scaled. The analytical emphasis remains on felicity conditions and interpretive success. Perlocutionary effects (i.e., how utterances influence feelings or actions) are acknowledged, yet no systematic mechanism identifies when such effects are overestimated or culturally amplified. A speech act may be interpreted as offensive, direct, or respectful, but the framework does not ask whether that interpretation reflects magnitude inflation. Moreover, speech act theory tends to isolate discrete acts (requests, apologies, compliments) without systematically assessing their relative weight within broader communicative ecologies. A request strategy observed in one context may be generalized across a culture without evaluating whether it is structurally central or peripheral.

A magnitude-based diagnostic approach would extend beyond illocutionary analysis by introducing a proportional evaluative lens. It asks not only what force an utterance carries but also how much relational load it encodes relative to other resources in the system. It distinguishes between high-impact structural markers and low-impact stylistic variation. Traditional pragmatics offers rich descriptive tools, yet it provides limited criteria for evaluating proportionality in cultural inference. There is no framework for identifying over-interpretation or under-interpretation at the cultural level. Cultural distortion remains analytically invisible. Thus, the central gap is the absence of a diagnostic model for cultural mis-scaling. Pragmatics explains communicative action; it does not calibrate cultural

magnitude. Recent developments in neo-pragmatics and interactional linguistics have further complicated the relationship between speech acts and cultural explanation. Conversation analytic approaches demonstrate that the force of an utterance is sequentially achieved rather than statically encoded (Heritage, 2012). Illocutionary force emerges through turn-taking, repair, and uptake, suggesting that pragmatic meaning is co-constructed in real time.

However, even sequential models do not explicitly address magnitude calibration. While they reveal how actions are interactionally accomplished, they remain descriptively focused rather than proportionally evaluative. That is, they illuminate *how* meaning is constructed but not *how much* cultural inference is warranted by that construction. In intercultural settings, participants often over-ascribe intentionality or cultural motivation to particular speech acts. This tendency reflects attribution bias (Fiske & Taylor, 2020), where behavior is interpreted as culturally driven rather than situationally constrained. Without a magnitude-sensitive framework, pragmatic analysis risks reinforcing such biases by equating observable differences with deep cultural divergence.

Politeness theory, particularly Brown and Levinson's (1987) face-based model, framed politeness as strategic mitigation of face-threatening acts. Their universalist claims posited that all individuals possess positive and negative face wants, and that linguistic strategies are selected to minimize threat. Cultural variation was acknowledged in weighting parameters such as power (P), distance (D), and imposition (R). Subsequent critiques challenged universalism and emphasized discursive negotiation (Locher & Watts, 2005). The notion of "relational work" reframes politeness as emergent and interactionally constructed rather than pre-coded. Impoliteness studies further highlighted evaluative judgments and moral positioning. Despite this sophistication, politeness research frequently categorizes cultures as "high-politeness" or "low-politeness," and "direct" or "indirect." Even when caution is exercised, macro-characterizations emerge from micro-level observations. For example, the frequency of mitigation markers may be interpreted as evidence of cultural orientation toward indirectness. What remains insufficiently addressed is the relative pragmatic load. In some languages, politeness is lexically concentrated in honorific morphology; in others, it is distributed across discourse-level strategies. Without assessing distributional weight, analysts risk equating frequency with magnitude.

Discursive approaches recognize variability but rarely operationalize proportionality. That is, while relational work is acknowledged as dynamic, there is limited methodological guidance for distinguishing central structural norms from peripheral stylistic patterns. A proportionality-oriented framework would identify this as a systematic site of mis-scaling. Analysts may treat certain forms as culturally defining when they are merely salient. The critical gap, therefore, is proportional reasoning. Politeness studies articulate strategies and evaluations but do not consistently assess their relative systemic embedding. Without magnitude calibration, politeness becomes vulnerable to overgeneralization.

Another limitation in politeness research concerns the reliance on elicited data, such as discourse completion tasks (DCTs), which may artificially amplify certain strategies (Taguchi & Roever, 2017). Such methods isolate specific acts and remove them from their broader interactional ecology, thereby increasing the salience of individual markers. When decontextualized responses are subsequently interpreted as evidence of cultural norms, the likelihood of magnitude distortion increases, and the analytic spotlight intensifies the visibility of particular politeness strategies, while backgrounded pragmatic resources remain unexamined. This methodological magnification parallels well-documented cognitive tendencies to overweight salient cues in judgment. Furthermore, relational work approaches emphasize participant evaluation, yet evaluations themselves are subject to magnitude bias. As Kahneman (2011) notes, evaluative judgments often rely on heuristics rather than proportional analysis. Thus, participants' own interpretations of politeness may reflect salience-driven weighting rather than objective pragmatic impact.

4. Cross-Cultural and Intercultural Pragmatics

Cross-cultural pragmatics systematically compared speech act realizations across languages, revealing patterned differences in requests, apologies, and refusals (Blum-Kulka et al., 1989). Interlanguage pragmatics extended this inquiry to second-language learners, examining pragmatic transfer and

competence (Kasper & Rose, 2002). These studies significantly advanced empirical rigor. However, methodological comparison of discrete speech acts often produced generalized cultural profiles. Observed tendencies such as greater use of external modification were sometimes interpreted as cultural norms rather than context-bound patterns.

Contrastive discourse analysis further documented variation in textual organization and stance-taking (Connor, 1996). However, the interpretive leap from patterned difference to cultural disposition often lacked adequate proportionality. Limited datasets were sometimes scaled to represent broad communities. Intercultural miscommunication research emphasized breakdowns arising from divergent expectations. However, not all divergence entails magnitude equivalence. Some differences are high-impact and systemic; others are minor stylistic contrasts.

A magnitude-sensitive critique suggests that cross-cultural pragmatics has been empirically rich but proportionally under-calibrated. Micro-level findings have occasionally been elevated into macro-cultural claims without diagnostic scaling. The core gap is the absence of proportional reasoning in cultural comparison. Comparative difference does not automatically entail structural magnitude. Without scaling mechanisms, cultural categories risk reification. This tendency toward reification cannot be explained solely in methodological terms. It is also rooted in cognitive processes that shape how analysts perceive, categorize, and evaluate differences. In other words, magnitude misjudgment is not merely a theoretical gap in linguistic models; well-documented biases in human judgment reinforce it. Understanding these cognitive underpinnings is therefore essential for explaining why cultural overinterpretation persists across traditions.

Large-scale comparative projects have significantly contributed to empirical mapping of pragmatic variation, yet they often rely on statistical frequency as a proxy for cultural significance (Blum-Kulka et al., 1989). Frequency, however, does not equal magnitude. A frequently occurring strategy may carry minimal relational weight, while a rare form may signal profound institutional positioning. Moreover, intercultural breakdown studies tend to foreground moments of communicative tension, thereby privileging exceptional cases over routine interaction. This methodological focus risks constructing cultural difference through magnification.

5. Cognitive Biases and Complexity Theory

Cognitive psychology demonstrates that human judgment is systematically biased. The availability heuristic shows that salient examples disproportionately shape perception (Tversky & Kahneman, 1973). The fundamental attribution error refers to the tendency to attribute behavior to character rather than to situational factors (Ross, 1977). Perceptual illusions such as the Müller–Lyer illusion demonstrate that perception is not merely inaccurate but systematically distorted. Analogously, linguistic judgments may exaggerate salient cultural differences. When a linguistic feature is noticeable, such as direct refusal or absence of honorifics, it becomes cognitively available and therefore appears magnified. Cultural stereotypes amplify this bias, stabilizing inflated interpretations. While intercultural research acknowledges the effects of stereotypes, cognitive bias has rarely been integrated into linguistic theory. Misjudgment is often treated as a misunderstanding rather than a perceptual distortion.

A proportional diagnostic perspective incorporates cognitive insights to explain why cultural inflation occurs. Mis-scaling is not solely theoretical; it is cognitively reinforced. The gap lies in integration. Bias is documented but not operationalized within linguistic analysis. Metacognitive research further demonstrates that individuals often mistake confidence for accuracy (Schwarz, 2004). In intercultural interpretation, high confidence in cultural explanations may reflect cognitive fluency rather than empirical validity. Cultural narratives that are coherent and stereotype-consistent are processed more fluently, thereby appearing more convincing. This fluency effect reinforces magnitude inflation. When a linguistic feature aligns with an existing cultural schema such as “hierarchical Persian” or “egalitarian English,” interpretation proceeds rapidly and uncritically. The absence of proportional diagnostics allows such interpretations to solidify into academic claims. Integrating cognitive bias research into linguistic methodology, therefore, provides empirical grounding for magnitude-based calibration. However, magnitude distortion does not arise solely from individual cognition. The structural properties of linguistic systems themselves also shape it. Even in the absence of bias, complex communicative

ecologies distribute meaning unevenly across forms. To understand how magnitude operates beyond individual perception, it is necessary to consider language as a dynamic system.

Complexity theory conceptualizes language as a dynamic, adaptive system (Larsen-Freeman, 2014). Meaning emerges from interaction among multiple variables; it is nonlinear and context-sensitive. Small perturbations may yield large effects, while large structural features may produce minimal observable change. Emergence theory highlights that discourse-level patterns cannot be reduced to isolated forms. Systems thinking emphasizes interdependence and feedback loops. However, complexity frameworks often remain metaphorical. While they caution against reductionism, they provide limited procedural guidance for magnitude assessment. Analysts are advised to avoid oversimplification but are not equipped with diagnostic scaling tools.

A magnitude-based analytical framework would translate complexity into operational proportionality. It treats linguistic systems as variable-weight networks in which features differ in both relational load and systemic centrality. The key gap, therefore, is methodological. Complexity is acknowledged, but not translated into magnitude-sensitive diagnostics. Complex dynamic systems theory emphasizes attractor states and nonlinear development (Larsen-Freeman, 2014). From a magnitude perspective, attractor states represent high-impact configurations within a system, while peripheral variations represent low-impact fluctuations. However, complexity theory has rarely operationalized criteria for distinguishing core attractors from peripheral noise in pragmatic analysis. Without such differentiation, analysts may inadvertently treat peripheral variation as system-defining. The challenge of distinguishing core attractors from peripheral fluctuations becomes even more acute in technologically mediated environments, where algorithmic systems must operationalize linguistic distinctions without full contextual embedding. In such environments, the risk of magnitude distortion is not only cognitive or theoretical but computational.

6. AI, Mediation, and Cultural Overinterpretation

AI-mediated communication introduces new risks of magnitude distortion; algorithmic systems process language without full contextual embedding. Cultural signals may be flattened, exaggerated, or misclassified. This problem is not emerging in isolation but is deeply continuous with longstanding concerns in algorithmic bias, where decontextualized data processing has already been shown to produce systematically skewed cultural associations.

Algorithmic bias research demonstrates that training data can encode stereotypes, leading to disproportionate associations (Noble, 2018). Decontextualized pragmatics, where utterances are processed without interactional history, further amplifies interpretive risk. In automated systems, micro-features may be treated as categorical markers. As a result, magnitude misjudgment can be computationally institutionalized. AI thus magnifies the urgency of magnitude-aware analysis. Without proportional reasoning, technological mediation risks stabilizing inflated cultural interpretations. The emerging gap is clear: magnitude-sensitive frameworks are necessary not only for human interpretation but for computational systems. Recent scholarship on algorithmic fairness demonstrates that machine learning systems tend to amplify statistically salient patterns without assessing contextual proportionality (Bender et al., 2021; Birhane et al., 2022). In cross-cultural datasets, this may result in over-association between particular lexical markers and cultural categories. Because AI systems lack holistic situational embedding, they are especially prone to magnitude distortion: high-frequency markers become cultural proxies, and nuanced pragmatic distributions are flattened. A magnitude-calibrated analytical framework would therefore have methodological implications for computational linguistics, suggesting that cultural tagging systems must incorporate weighting mechanisms that distinguish statistical frequency from interactional impact.

Taken together, the preceding review highlights a consistent analytical gap across traditions: the absence of a systematic mechanism for evaluating proportionality in cultural interpretation. This gap motivates the need for a magnitude-based framework. Across traditional cultural models, pragmatic theory, politeness research, intercultural comparison, cognitive psychology, complexity theory, and AI studies, a shared limitation becomes visible: none provides a systematic diagnostic mechanism for calibrating the proportionality of cultural interpretation. Each tradition identifies part of the problem:

essentialism, bias, reductionism, algorithmic amplification, but none offers a unified framework for evaluating magnitude. The need, therefore, is not for an additional cultural theory, but for a cross-cutting diagnostic lens capable of integrating these insights into a proportional model of interpretation.

7. Magnitude Culturology as a Theoretical Lens

Recent developments in language studies increasingly acknowledge that cultural interpretation is not a neutral analytical act but a form of judgment shaped by cognitive, interactional, and systemic constraints. Research in cognitive psychology has demonstrated that human judgment is systematically prone to magnitude errors: individuals tend to overestimate the importance of salient cues, underestimate the influence of distributed factors, and generalize beyond the evidential scope of available data (Lieder & Griffiths, 2020). These distortions are not confined to numerical reasoning; they extend to social evaluation, causal attribution, and interpretive inference (Fiske & Taylor, 2020). Linguistic interpretation, particularly in intercultural contexts, is therefore inherently vulnerable to magnitude misjudgment. Magnitude Culturology builds on this insight by treating cultural interpretation in language studies as a form of judgment that requires calibration. Rather than assuming that cultural meaning is either present or absent, this perspective foregrounds the question of proportionality: how much cultural inference is warranted by a given linguistic phenomenon. Magnitude Culturology is a proportional theory of cultural interpretation in language studies that conceptualizes culture not as a categorical explanatory variable but as a gradient, distributed, and weight-sensitive dimension of communicative systems. It is grounded in magnitude thinking (Pishghadam, 2025a) and extends it to the domain of linguistic and intercultural analysis. At its core, Magnitude Culturology posits that cultural meaning varies in scale, density, distribution, and interactional impact across communicative systems. Cultural interpretation, therefore, must be calibrated according to the relative magnitude of linguistic phenomena rather than inferred from their mere presence.

To illustrate how magnitude misjudgment operates in practice, this framework can be observed across three major domains of interactional meaning: address practices, politeness phenomena, and alignment processes. These domains have long been treated as culturally diagnostic sites in pragmatics and intercultural communication; however, their interpretive weight varies significantly depending on how relational meaning is distributed within communicative systems. Address practices have long been recognized as central indicators of social relations in interaction, and they are frequently mobilized in intercultural pragmatics as evidence of hierarchy, distance, intimacy, and politeness (Brown & Levinson, 1987; Spencer-Oatey & Kádár, 2021; Wierzbicka, 2009). However, much of this literature implicitly assumes that address forms carry comparable pragmatic weight across languages and communicative systems. From the perspective of Magnitude Culturology, this assumption constitutes a fundamental analytical error. Address forms do not simply encode social relations; they do so with varying degrees of pragmatic load depending on their systemic embedding and holism. Consider, for example, the contrast between English and Persian address practices. In English, address practices are characterized by a relatively limited inventory of honorific and title-based distinctions. The predominance of first-name address in many institutional contexts has often been interpreted as reflecting egalitarian cultural values (Hofstede, 2001; Holliday, 2018). However, English distributes relational meaning across multiple pragmatic layers, including modality, mitigation, discourse organization, and prosody (Culpeper & Haugh, 2014), which means that address forms function as relatively low-load resources within the broader communicative system. In Persian, by contrast, address practices are embedded in a highly stratified system that includes titles, kinship terms, pluralization, and formulaic expressions, concentrating relational meaning within address choices and thereby increasing their pragmatic impact. Traditional interpretations often treat this contrast as evidence of a deeper cultural orientation toward hierarchy or formality. A magnitude-oriented analysis, however, suggests that the difference lies primarily in the systemic distribution of pragmatic load rather than in any essential cultural disposition, and that interpreting address forms as direct reflections of cultural values without calibrating their relative weight within each system constitutes a magnitude misjudgment. This is not to deny that cultural values shape address practices, but rather to argue that the interpretive weight assigned to address forms must be proportional to their systemic role and interactional impact. As Table 1 illustrates, the distribution of pragmatic load across address systems

differs systematically in ways that shape both interactional meaning and the interpretive risks associated with cultural overgeneralization.

Table 1
Distribution of Pragmatic Load across English and Persian Address Systems

Dimension	English Address System	Persian Address System	Magnitude-Oriented Interpretation
Inventory size	Limited titles and honorifics	Extensive titles, kinship terms, honorifics, pluralization	Unequal systemic encoding of relational meaning
Pragmatic load of address forms	Low to moderate	High	Differential concentration of pragmatic weight
Distribution of relational meaning	Distributed across multiple resources	Concentrated on addressing practices	Systemic redistribution of pragmatic load
Salience of deviation	Relatively low	Relatively high	Increased risk of magnitude misjudgment
Risk of cultural overinterpretation	Lower	Higher	Salience-driven cultural inflation

As summarized in Table 1, pragmatic weight differs not in kind but in degree across systems. Address practices, therefore, illustrate how micro-level forms are frequently scaled up into macro-cultural claims, reflecting salience-driven magnitude distortion (Kahneman, 2011).

A similar pattern emerges in politeness phenomena, where visible markers often create an illusion of cultural depth. Politeness has been one of the most extensively studied domains of intercultural pragmatics (Brown & Levinson, 1987; Kádár & Haugh, 2014). However, research frequently equates linguistic visibility with cultural significance. Magnitude Culturology distinguishes between salience and interactional impact. In English, politeness is distributed across subtle pragmatic resources such as modal verbs, hedging, and discourse markers, producing a cumulative relational effect. In Persian, politeness is often encoded through explicit lexical and formulaic markers, which increases their perceptual salience and susceptibility to overinterpretation. The salience–impact distinction demonstrates how visible features may carry limited interactional weight yet become culturally overinterpreted. Magnitude misjudgment arises when salience is mistaken for cultural significance.

The scaling of cultural meaning becomes even more evident in alignment and stance-taking processes. Alignment refers to how speakers negotiate relational positioning through linguistic choices (Spencer-Oatey & Franklin, 2009). In intercultural research, alignment behaviors are often interpreted through macro-cultural categories such as collectivism versus individualism. Magnitude Culturology problematizes this interpretive move by emphasizing that alignment is an emergent phenomenon shaped by multiple contextual variables, including participant roles, institutional settings, and discourse goals. In English interactions, alignment is often negotiated through subtle cues such as intonation and discourse structure, distributing relational meaning across layers of interaction. In Persian, alignment may be encoded through more explicit formulaic strategies, making relational positioning linguistically visible. However, explicitness does not necessarily imply deeper cultural orientation; rather, it reflects differences in systemic organization. Treating explicit alignment strategies as evidence of stronger cultural values constitutes magnitude inflation. Taken together, these domains demonstrate that cultural misjudgment frequently arises from disproportionate scaling of interactional phenomena rather than from genuine cultural divergence. Address, politeness, and alignment, therefore, serve as analytical sites illustrating how linguistic salience, systemic distribution, and interactional impact interact to shape cultural interpretation.

Building on these observations, Magnitude Culturology advances five diagnostic dimensions: scale, interactional impact, complexity, holism, and accuracy. These dimensions provide a structured

framework for evaluating whether cultural interpretations are proportionate to the phenomena under analysis.

Table 2
Core Dimensions of Magnitude Culturology

Dimension	Definition	Typical Interpretive Error
Scale	The level at which a linguistic phenomenon operates (micro vs. macro)	Scaling micro phenomena into macro-cultural claims
Interactional Impact	The pragmatic consequences of linguistic forms in interaction	Overestimating or underestimating pragmatic load
Complexity	The number and interaction of variables shaping meaning	Reducing multi-layered phenomena to single cultural explanations
Holism	The relation of linguistic forms to the broader communicative system	Isolating forms from co-occurring pragmatic resources
Accuracy	The degree to which cultural interpretations align with the actual scope and weight of linguistic phenomena	Producing simplified or distorted cultural conclusions

Table 2 conceptualizes cultural interpretation as a proportional judgment process and demonstrates how magnitude misjudgment emerges when linguistic phenomena are mis-scaled, over-weighted, oversimplified, or decontextualized. To illustrate operationalization, consider a case in which a Persian speaker uses the plural address in a formal interaction. A magnitude-aware analysis would (1) identify the linguistic form (pluralization), (2) assess its systemic embedding within Persian address conventions, (3) evaluate its interactional impact within the specific exchange, (4) compare its pragmatic load to co-occurring resources, and (5) determine whether macro-cultural inference is proportionate to its relative weight. Only after these steps would cultural interpretation be warranted. Crucially, each step requires comparative assessment rather than binary classification; the analyst must consider alternative explanations (e.g., situational, interpersonal, institutional) and evaluate their relative explanatory weight.

Table 3
Cultural Interpretation with/without Magnitude Calibration

Magnitude-Aware Interpretation	Conventional Cultural Interpretation	Analytical Dimension
How much cultural meaning does it carry?	Is the behavior cultural?	Core question
Interpretive scale matched to the phenomenon.	Micro forms scaled up to macro culture	Scale alignment
Resources with variable pragmatic load	Direct indices of cultural values	View of linguistic forms
Salience distinguished from interactional impact	Salient forms treated as decisive	Role of salience
Magnitude misjudgment	Cultural difference	Source of misunderstanding
Proportional and system-sensitive interpretation	Cultural labeling and generalization	Analytical outcome

Table 3 further illustrates the analytical shift from conventional cultural labeling to magnitude-aware interpretation by highlighting how proportional calibration reshapes analytical conclusions. Magnitude Culturology thus reframes cultural interpretation as a calibrated analytical process rather than categorical labeling. It does not deny cultural variation; rather, it provides a diagnostic mechanism for

distinguishing cultural difference from cultural distortion by foregrounding proportional reasoning as a prerequisite for interpretation.

Figure 1
Magnitude Calibration in Cultural Interpretation

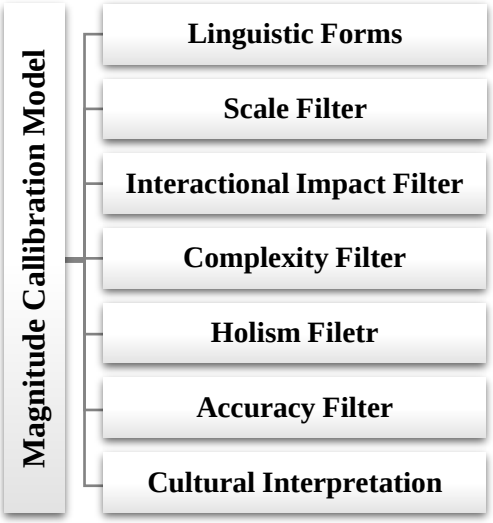

Figure 1 schematically represents this calibration process, illustrating how linguistic input must be filtered through interactional impact, systemic holism, and contextual complexity before contributing to cultural inference. The figure operationalizes the five diagnostic dimensions (i.e., scale, impact, complexity, holism, and accuracy) as sequential filters that progressively refine raw linguistic observations into proportionally calibrated cultural judgments.

Overall, the theoretical arguments and illustrative domains discussed above establish Magnitude Culturology as a diagnostic framework for evaluating the proportionality of cultural interpretation in language studies. By foregrounding scale, interactional impact, and systemic distribution, this framework shifts analytical attention from categorical cultural explanations toward calibrated interpretive judgment. The following discussion considers the broader implications of this perspective for intercultural pragmatics and linguistic theory.

8. Concluding Remarks

Synthesizing the three research questions, the study suggests that cultural misinterpretation in language studies is often better framed as an issue of analytical scale rather than descriptive inaccuracy. By introducing Magnitude Culturology as a conceptual and analytical framework, this paper has argued that many phenomena commonly attributed to cultural difference are better understood as outcomes of misjudged magnitude in linguistic interpretation. The qualitative analyses of address, politeness, and alignment demonstrate that linguistic forms do not carry uniform pragmatic weight across languages and contexts; instead, their significance emerges from their holism, interactional impact, and distribution of pragmatic load within communicative ecologies. Pragmatic load is understood here as the relative amount of relational, social, and interactional meaning a linguistic resource carries within a communicative system. The five diagnostic dimensions advanced in this framework (i.e., scale, impact, complexity, holism, and accuracy) provide criteria for evaluating whether cultural explanations are proportionate to systemic distribution, interactional function, and contextual embedding. Scale addresses whether a linguistic phenomenon is being interpreted at the appropriate level of analysis, cautioning against the common error of scaling micro-level patterns into macro-cultural claims. Impact concerns the pragmatic consequences of linguistic forms in interaction and whether their relational load is being overestimated or underestimated. Complexity captures the number and interaction of variables shaping meaning, warning against the reduction of multi-layered phenomena to single cultural

explanations. Holism examines the relation of linguistic forms to the broader communicative system, discouraging the isolation of forms from co-occurring pragmatic resources. Accuracy evaluates whether cultural interpretations align with the actual scope and weight of linguistic phenomena, distinguishing between warranted cultural inference and simplified or distorted cultural conclusions. Collectively, these dimensions operationalize the framework's core proposition that cultural interpretation must be calibrated according to the relative magnitude of linguistic phenomena rather than inferred from their mere presence.

What this study adds to existing critiques is a procedural solution rather than a conceptual objection. Classical models of culture in communication have mapped linguistic patterns onto broad cultural dimensions such as power distance, collectivism, and contextual orientation (Hall, 1976; Hofstede, 2001; Triandis, 1995). Although these models have been widely critiqued for essentialism and reductionism, their underlying logic continues to shape much contemporary research, where localized linguistic observations are frequently extrapolated into generalized cultural claims (Holliday, 2018; Kubota, 2020). The present study extends these critiques by showing that the core problem is not merely essentialism but a failure to calibrate the scale of interpretation to the scale of the phenomenon under analysis. Comparable calibration failures have been documented in analyses of advertising discourse and organizational communication, where communicative elements are often misjudged in terms of their actual persuasive or strategic impact (Ebrahimi et al., 2025). The study showed that address forms, politeness strategies, and alignment practices function as components of broader communicative systems rather than as isolated indicators of cultural values. In English, relational meaning is distributed across a wide range of pragmatic resources, including modality, mitigation, discourse organization, and prosody, which reduces the relative pragmatic load of address forms and explicit politeness markers. In Persian, by contrast, relational meaning is more densely encoded in address practices and formulaic expressions, increasing their salience and interactional impact. Traditional cultural interpretations often treat these differences as evidence of deeper cultural orientations toward hierarchy or formality. A magnitude-oriented perspective, however, suggests that they reflect differences in systemic organization and pragmatic load distribution rather than differences in cultural essence. This reinterpretation aligns with recent developments in sociolinguistics and pragmatics that conceptualize meaning as emergent, distributed, and contextually negotiated rather than as a direct reflection of stable cultural norms (Blommaert, 2020; Busch, 2017). It also resonates with discursive approaches to politeness, which emphasize that politeness is not inherent in linguistic forms but constructed through participant evaluations and interactional processes (Kádár, 2019; Locher & Watts, 2005). Magnitude Culturology extends these insights by introducing proportional reasoning as a necessary analytical layer: even when meaning is negotiated and emergent, its cultural interpretation must still be calibrated to its relative interactional weight.

The implications of this framework extend beyond theoretical debates. In language education, cultural explanations are often simplified for pedagogical purposes, leading to stereotypical representations of communicative norms and potentially misleading learners about pragmatic variation (Baker, 2015; Dervin, 2016). A magnitude-aware approach to teaching culture would encourage educators to present cultural patterns with explicit attention to their scope and variability, distinguishing between high-impact structural norms and low-impact stylistic variation. In language assessment, an overinterpretation of pragmatic behavior may lead to biased evaluations of learners' communicative competence and intercultural ability, as test designers may treat observed pragmatic strategies as evidence of cultural deficiency rather than as contextually appropriate choices. In digitally mediated communication and AI-driven language technologies, algorithms that prioritize frequency and salience risk amplifying culturally marked features while flattening contextual nuance, thereby reproducing and intensifying cultural stereotypes (Bender et al., 2021; Birhane et al., 2022). A magnitude-aware approach may also inform discussions in computational linguistics, particularly regarding the weighting of culturally marked features in natural language processing systems. The framework further contributes to ongoing debates about the ethics of cultural representation in language studies. By revealing how cultural meaning is often inflated through disproportionate scaling, it highlights the epistemological and ideological consequences of cultural overinterpretation. Cultural stereotypes are not simply social prejudices but also methodological artifacts produced by uncalibrated analytical

practices. Recognizing this connection underscores the need for greater reflexivity in linguistic research and for methodological tools that constrain interpretive inflation. This study has argued that advancing intercultural analysis does not require abandoning cultural explanation, but recalibrating it. Magnitude Culturology reframes culture as a distributed and gradient phenomenon rather than a monolithic explanatory variable.

The findings suggest that the future of language studies depends not on asking whether culture matters, but on learning to assess how much it matters in any given interpretive act. The five diagnostic dimensions of scale, impact, complexity, holism, and accuracy provide a systematic mechanism for making this assessment, enabling analysts to distinguish between situations where cultural inference is warranted and situations where alternative explanations, such as situational, interpersonal, or institutional factors, carry greater explanatory weight. While the study offers a theoretically grounded framework, it remains conceptual in nature and does not provide systematic empirical validation. The illustrative analyses are intended to demonstrate analytical applicability rather than to represent comprehensive cross-cultural patterns. Future research should therefore empirically operationalize magnitude dimensions through corpus-based and experimental methods, developing Magnitude Culturology through systematic empirical validation across a broader range of languages, interactional settings, and communicative modalities. Corpus-based studies could examine the frequency and distribution of pragmatic resources across languages to establish empirical baselines for pragmatic load, while experimental designs could investigate how magnitude judgments are formed and how they influence cultural interpretation. Longitudinal and ethnographic research may shed light on how magnitude judgments evolve within specific communities of practice and how they are shaped by social and institutional factors. Extending magnitude-aware analysis to AI-mediated communication offers a promising avenue for examining how algorithmic interpretation may amplify or distort cultural meaning, underscoring the need for calibrated cultural diagnostics in both human and machine-mediated interaction.

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Data Availability

No empirical data were collected or analyzed in this study. The illustrative examples and analytical discussions are based on existing published literature and publicly available linguistic data, all of which are appropriately cited in the references.

Ethics Declaration

This study is a conceptual and theoretical analysis that does not involve human participants or primary data collection. As such, no ethical approval was required.

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